



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,633	07/15/2003	Robert A. Kennewick	25300-003	5659

909 7590 04/30/2007
PILLSBURY WINTHROP SHAW PITTMAN, LLP
P.O. BOX 10500
MCLEAN, VA 22102

EXAMINER

WOZNIAK, JAMES S

ART UNIT	PAPER NUMBER
----------	--------------

2626

MAIL DATE	DELIVERY MODE
-----------	---------------

04/30/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/618,633

Applicant(s)

KENNEWICK ET AL.

Examiner

James S. Wozniak

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claim Objections

1. **Claims 3, 21, 34 and 43-55** are objected to because of the following informalities:

In claim 3, line 3, “the content and context” should be changed to --a content and context-- in order to provide proper antecedent basis.

Claim 21 (second claim 21) is misnumbered and should be renumbered to claim 22.

Claim 43 (second claim 43) is misnumbered and should be renumbered to claim 44. Also, as a result of misnumbered claim 44, the subsequent claims 44-55 are misnumbered and should be respectively renumbered to claims 45-56.

In claim 34, line 1, “the device system” should be changed to --a device system-- in order to provide proper antecedent basis.

Appropriate correction is required.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-

type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-55 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-40 of copending Application No. 10/452,147. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications essentially refer to the same system/method. Although application 10/452,147 additionally recites a parser and event manager in the independent claims, these elements would be inherently included in

the structure of the independent claims of the present application because the present application includes natural language understanding features (which requires parsing) and speech forwarding (which requires the use of an event manager). Thus, both claimed systems/methods are not patentably distinct from each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-4, 6, 17-18, 21-23, and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett et al (*U.S. Patent: 6,615,172*) in view of Lin et al ("*Distributed Architecture for Cooperative Spoken Dialogue Agents with Coherent Dialogue State and History*," 1999).

With respect to **Claim 1**, Bennett discloses:

A speech unit that receives the user generated natural language speech utterance and converts the user generated natural language speech utterance into an electronic signal, said user generated natural language speech utterance having at least one of a query and a command (*coding a spoken query, Col. 10, Line 54- Col. 11, Line 17; and Col. 15, Line 53- Col. 16, Line 21*);

A natural language speech processing system that receives the electronic signal, that retrieves said at least one of said query and said command from the electronic signal, that selects at least one application portion associated with said at least one of said query and said command, that forwards said at least one of query and command to said at least one application portion, wherein said at least one application portion receives, processes and responds to said at least one of said query and a said command (*natural language speech recognizer that retrieves a query from a speech signal and forwards the question to a specific application portion to retrieve an answer, Col. 24, Line 46- Col. 25, Line 67; Col. 27, Lines 17-51; and Col. 29, Line 30- Col. 30, Line 7*); and

A transceiver, in communication with said at least one application portion, that transmits an electronic message associated with said at least one of query and command (*server capable of receiving coded speech queries (as noted in the above cited columns) and transmitting retrieved answers, Col. 29, Lines 21-29, which would inherently require transceiving means*).

Although Bennett discloses processing a natural language query, forwarding the query to a specific application portion based on context, and method use with multiple application domains (Col. 29, Line 47-Col. 30, Line 2), Bennett does not explicitly disclose the use of arbitrating means for selecting and forwarding a query to an executable dialog agents associated with different domains. Lin, however discloses a user interface agent that enables query forwarding to a particular dialog agent for answer retrieval (*Sections 2.2- 3.1 and Fig. 3*).

Bennett and Lin are analogous art because they are from a similar field of endeavor in information retrieval systems utilizing speech recognition. Thus, it would

have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Bennett with the interface agent taught by Lin in order to handle dialog across multiple subject domains (or applications) efficiently and intelligently (*Lin, Section 1*).

With respect to **Claim 2**, Lin further discloses:

The natural language speech processing system further comprises an event manager, said event manager coordinating interaction between components of the natural language speech processing system (*user interface agent, Fig. 3*).

With respect to **Claim 3**, Bennett further discloses:

The natural language speech processing system further comprises a parser that determines a domain for the user generated natural language utterance based on the content and context of the user utterance (*natural language understanding means utilizing parsing to determine an application domain based on user speech content and context, Col. 11, Line 59- Col. 12, Line 10; Col. 17, Lines 28-36; and Col. 27, Lines 17-51*).

With respect to **Claim 4**, Bennett further discloses:

A text to speech engine that converts a text message to a speech message (*text-to-speech engine, Col. 10, Lines 54-67*).

With respect to **Claim 6**, Lin further discloses dialog domain agents associated with travel information (*Fig. 3*).

With respect to **Claim 17**, Bennett further discloses:

The transceiver is a wide-area RF transceiver (*RF link over a cellular network, Col. 10, Lines 33-53*).

With respect to **Claim 18**, Bennett further discloses:

The speech unit includes a speech coder (*speech coding means, Col. 15, Line 53-Col.16, Line 21*).

With respect to **Claim 21** (first claim 21), Bennett further discloses:

The speech coder uses an adaptive lossy audio compression (*speech encoding that includes only the least amount of information necessary to adequately and quickly complete speech recognition, Col. 15, Line 543- Col. 16, Line 21*).

With respect to **Claim 22** (*second claim 21*), Bennett further shows:

The speech unit is located remotely from the natural language speech processing system and the transceiver (*Fig. 1*).

With respect to **Claim 23**, Bennett further discloses a display (*Col. 10, Lines 54-65*).

With respect to **Claim 27**, Bennett discloses a network for cellular phones (*Col. 10, Lines 33-53*), while Lin recites a common database of dialog states/histories shared across multiple common agents (*Fig. 3*).

5. **Claims 7-12, 19, 43 (second claim 43)-45, and 50-55** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett et al in view of Lin et al and further in view of Gerson (*U.S. Patent: 6,937,977*).

With respect to **Claims 7-10**, Bennett in view of Lin discloses dialog agents capable of retrieving responses to speech inputs for a number of different applications, as applied to Claim 1. Bennett in view of Lin does not specifically disclose an application domain related to communicating with a vehicle device in order to enable device control.

Gerson, however, discloses a vehicle control server application that recognizes a control command and communicates a command message back to a vehicle device to enable device control (*Col. 6, Line 66-Col. 7, Line 15*).

Bennett, Lin, and Gerson are analogous art because they are from a similar field of endeavor in speech-controlled systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Bennett in view of Lin with the vehicle device control application taught by Gerson in order to increase system applicability by enabling its use for hands-free control of vehicle devices (*Gerson, Col. 6, Line 66- Col. 7, Line 15; and Col. 9, Lines 5-8*).

With respect to **Claim 11**, Gerson further shows the vehicle control application located remotely from a vehicle (*Fig. 1*).

With respect to **Claim 12**, Gerson further discloses control of a vehicle entertainment system and other vehicle devices (*Col. 6, Line 66- Col. 7, Line 15*).

With respect to **Claim 19**, Gerson further discloses an echo canceling block capable of eliminating echoes and noise in varying conditions that provides the benefit of preventing an echo from being recognized at a speech recognizer (*Col. 9, Line 24-Col. 10, Line 10*).

Claim 43 (second claim 43) contains subject matter similar to Claims 1 and 7-10, and thus, is rejected for the same reasons.

Claim 44 contains subject matter similar to Claim 12, and thus, is rejected for the same reasons.

Claim 45 contains subject matter similar to Claim 6, and thus, is rejected for the same reasons.

Claim 50 contains subject matter similar to Claim 17, and thus, is rejected for the same reasons.

With respect to **Claim 51**, Bennett discloses a speech filtering means (*Col. 15, Line 53- Col. 16, Line 14*).

Claim 52 contains subject matter similar to Claim 18, and thus, is rejected for the same reasons.

Claim 53 contains subject matter similar to Claim 21, and thus, is rejected for the same reasons.

With respect to **Claim 54**, Gerson further discloses receiving a speech utterance in a vehicle (*Col. 9, Lines 5-22*).

Claim 55 contains subject matter similar to Claim 27, and thus, is rejected for the same reasons.

6. **Claims 5, 13-16, 28-29, 31-37, 40-41, and 43 (first claim 43)** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett et al in view of Lin et al and further in view of Hedin et al (U.S. Patent: 6,185,535).

With respect to **Claims 5 and 13**, Bennett in view of Lin discloses dialog agents capable of retrieving responses to speech inputs for a number of different applications, as applied to Claim 1. Bennett in view of Lin does not specifically disclose the communication of a recognized command with a remotely located service, however, Hedin discloses a speech recognizer that sends a recognized speech command message to an external service (*Col. 9, Line 36- Col. 10, Line 24; and Fig. 3, Elements 205, 207 and 307*).

Bennett, Lin, and Hedin are analogous art because they are from a similar field of endeavor in speech-controlled systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Bennett in view of Lin with the remote service communication means taught by Hedin in order to enable access and control of remote server applications (*Hedin, Col. 2, Lines 39-42*).

With respect to **Claim 14**, Hedin discloses the remotely located specialized services as applied to Claim 13.

With respect to **Claim 15**, Hedin further discloses:

The transceiver transmits the message via a communication network (*wireless communication network, Col. 5, Lines 34-55*).

With respect to **Claim 16**, Bennett further discloses:

The communication network is a wide area wireless network (*cellular network, Col. 10, Lines 33-53*).

Claim 28 recites subject matter similar to Claims 1 and 5, and thus, is rejected for the same reasons.

With respect to **Claim 29**, Bennett discloses the speech coding process as applied to Claim 18.

Claim 31 contains subject matter similar to Claims 1 and 6, and thus, is rejected for the same reasons.

Claims 32-33 contains subject matter similar to Claim 5, and thus, is rejected for the same reasons.

With respect to **Claim 34**, Hedin further discloses the remotely located server device as shown in Fig. 1b.

Claim 35 contains subject matter similar to Claim 15, and thus, is rejected for the same reasons.

Claim 36 contains subject matter similar to Claim 14, and thus, is rejected for the same reasons.

Claim 37 contains subject matter similar to Claim 17, and thus, is rejected for the same reasons.

Claim 40 contains subject matter similar to Claim 21 (first claim 21), and thus, is rejected for the same reasons.

Claim 41 contains subject matter similar to Claim 22 (second claim 21), and thus, is rejected for the same reasons.

Claim 43 (first claim 43) contains subject matter similar to Claim 27, and thus, is rejected for the same reasons.

7. **Claim 20** is rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett et al in view of Lin et al and further in view of DeLine et al (*U.S. Patent: 6,420,975*).

With respect to **Claim 20**, Bennett in view of Lin discloses the dialog agent system capable of receiving and encoding a user speech input, as applied to Claim 18. Bennett in view of Lin does not specifically suggest that a speech input from a user is received via a one-dimensional microphone array, however DeLine discloses the use of such an array in a speech-enabled control system (*lined array of microphones, Col. 48, Lines 53-63*).

Bennett, Lin, and DeLine are analogous art because they are from a similar field of endeavor in speech-controlled systems. Thus, it would have been obvious to a person

of ordinary skill in the art, at the time of invention, to modify the teachings of Bennett in view of Lin with the one dimensional microphone array taught by DeLine in order to enhance vocal signal content and eliminate acoustic noise (*DeLine, Col. 48, Lines 53-63*).

8. **Claims 24-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett et al in view of Lin et al and further in view of Turnbull et al (*U.S. Patent: 6,980,092*).

With respect to **Claims 24-25**, Bennett in view of Lin discloses the speech interactive system, as applied to Claim 1. Bennett in view of Lin does not specifically suggest system implementation in a telematics control unit. Turnbull, however, discloses implementation of a speech interactive system embedded in a telematics device (*speech recognition processing, Col. 30, Line 43- Col. 31, Line 2, in an in-vehicle telematics assembly, Col. 29, Lines 56-63; controlling in-vehicle devices in response to recognized voice commands, Col.28, Line 53- Col. 29, Line 36, Col. 30, Line 43- Col. 31, Line 2, and Col. 36, Lines 57-63; and control bus for sending control signals to the various vehicle devices, Fig. 11, Element 102*).

Bennett, Lin, and Turnbull are analogous art because they are from a similar field of endeavor in speech-controlled systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Bennett in view of Lin with the telematics unit taught by Turnbull in order to implement a speech communication and control system that can be readily installed in a vehicle (*Turnbull, Col. 3, Lines 20-22*).

With respect to **Claim 26**, Turnbull discloses the in-vehicle telematics unit as applied to Claims 24-25.

9. **Claims 30, 38-39, and 42** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett et al in view of Lin et al further in view of Hedin et al and further in view of Gerson.

With respect to **Claim 30**, Bennett in view of Lin and further in view of Hedin discloses dialog agents capable of retrieving responses to speech inputs for a number of different applications, as applied to Claim 28. Bennett in view of Lin and further in view of Hedin does not specifically disclose an application domain related to communicating with a vehicle device in order to enable device control. Gerson, however, discloses a vehicle control server application that recognizes a control command and communicates a command message back to a vehicle device to enable device control (*Col. 6, Line 66-Col. 7, Line 15*).

Bennett, Lin, Hedin, and Gerson are analogous art because they are from a similar field of endeavor in speech-controlled systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Bennett in view of Lin and further in view of Hedin with the vehicle device control application taught by Gerson in order to increase system applicability by enabling its use for hands-free control of vehicle devices (*Gerson, Col. 6, Line 66-Col. 7, Line 15; and Col. 9, Lines 5-8*).

With respect to **Claims 38-39**, Gerson further discloses an echo canceling block capable of eliminating echoes and noise in varying conditions that provides the benefit of

preventing an echo from being recognized at a speech recognizer (*Col. 9, Line 24-Col. 10, Line 10*).

With respect to **Claim 42**, Gerson further discloses receiving a speech utterance in a vehicle (*Col. 9, Lines 5-22*).

10. **Claims 46-49** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett et al in view of Lin et al further in view of Gerson and further in view of Hedin et al.

With respect to **Claims 46-47**, Bennett in view of Lin and further in view of Gerson discloses dialog agents capable of retrieving responses to speech inputs for a number of different applications, as applied to Claim 43. Bennett in view of Lin and further in view of Gerson does not specifically disclose the communication of a recognized command with a remotely located service device, however, Hedin discloses a speech recognizer that sends a recognized speech command message to an external service (*Col. 9, Line 36- Col. 10, Line 24; and Fig. 3, Elements 205, 207 and 307*).

Bennett, Lin, Gerson, and Hedin are analogous art because they are from a similar field of endeavor in speech-controlled systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Bennett in view of Lin and further in view of Gerson with the remote service communication means taught by Hedin in order to enable access and control of remote server applications (*Hedin, Col. 2, Lines 39-42*).

Claim 48 contains subject matter similar to Claim 15, and thus, is rejected for the same reasons.

Claim 49 contains subject matter similar to Claim 14, and thus, is rejected for the same reasons.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Balakrishnan (*U.S. Patent: 6,233,559*)- discloses an arbitrator that forwards a speech command to specific applications.

White et al (*U.S. Patent: 6,408,272*)- discloses a voice user interface featuring a transceiver for communicating voice commands to a remote system.

Grant et al (*U.S. Patent: 6,523,061*)- discloses a method for voice control of processes and applications.

Kohut et al (*U.S. Patent: 6,741,931*)- discloses a vehicle navigation system that communicates with a remote navigation server that includes voice recognition, voice generation, and general application software.

Niemoeller (*U.S. Patent Application Publication: 2003/0182132*)- communicates between voice input and voice-controlled devices according to the Bluetooth standard.

Lind et al ("The Network Vehicle- A Glimpse into the Future of Mobile Multi-Media," 1999)- discloses a vehicle system having features as part of a client/server network architecture.

Kuhn et al ("*Hybrid In-Car Speech Recognition for Mobile Multimedia Applications*," 1999)- discloses a vehicle-based system connected to a server capable of performing speech recognition and enabling information resource access.

Belvin et al ("*Development of the HRL Route Navigation Dialog System*," 2001)- discloses a route navigation system utilizing natural language processing.

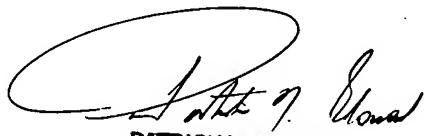
Zhao ("*Telematics: Safe and Fun Driving*," 2002)- discloses the use of speech recognition in an in-vehicle telematics system.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632. The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached at (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James S. Wozniak
4/16/2007



PATRICK N. EDOUARD
SUPERVISORY PATENT EXAMINER